

IN THE CLAIMS

Please amend the claims as follows:

Claims 1-23 (Cancelled).

Claim 24. (Previously Presented): An information processing apparatus comprising:  
encoding means for encoding an input stream so as to include, among a base stream and first to n-th extension streams having extensibility for the base stream, at least the base stream and the first extension stream;

adding means for adding transport priority information that indicates priority and respectively distinguishes the base stream from the first to n-th extension streams, which are encoded by the encoding means, to the base stream and the first to n-th extension streams;  
and

packetizing means for packetizing the base stream and the first to n-th extension streams, to which the transport priority information is added by the adding means, into TS packets.

Claim 25. (Previously Presented): An information processing method implemented using an information processing apparatus having at least encoding and packetizing parts, comprising:

an encoding step of encoding, using the information processing apparatus, an input stream so as to include, among a base stream and first to n-th extension streams having extensibility for the base stream, at least the base stream and the first extension stream;

an adding step of adding transport priority information that indicates priority and respectively distinguishes the base stream from the first to n-th extension streams, which are encoded by the encoding step, to the base stream and the first to n-th extension streams; and

a packetizing step of packetizing, using the information processing apparatus, the base stream and the first to n-th extension streams, to which the transport priority information is added by the adding step, into TS packets.

Claim 26. (Previously Presented): A non-transitory computer readable medium having stored thereon a program that when executed by the computer causes the computer to execute an information processing method comprising:

an encoding step of encoding an input stream so as to include, among a base stream and first to n-th extension streams having extensibility for the base stream, at least the base stream and the first extension stream;

an adding step of adding transport priority information that indicates priority and respectively distinguishes the base stream from the first to n-th extension streams, which are encoded by the encoding step, to the base stream and the first to n-th extension streams; and

a packetizing step of packetizing the base stream and the first to n-th extension streams, to which the transport priority information is added by the adding step, into TS packets.

Claim 27. (Previously Presented): An information processing apparatus comprising:

input means for inputting a stream including TS packets forming a base stream, TS packets forming each of first to n-th extension streams having extensibility for the base stream, each of the TS packets having transport priority information that indicates priority and respectively distinguishes the base stream from the first to n-th extension streams;

determining means for referring to the transport priority information stored in the TS packets input by the input means and for determining the type of processable stream;

selecting means for selecting, from the stream, the TS packets having the transport priority information associated with the stream determined by the determining means to be processable; and

decoding means for decoding the TS packets selected by the selecting means.

Claim 28. (Previously Presented): The information processing apparatus according to claim 27, further comprising:

buffering means for buffering, with respect to the transport priority information, the TS packets selected by the selecting means.

Claim 29. (Previously Presented): An information processing method implemented using an information processing apparatus having at least a decoding part, comprising:

an input step of inputting a stream including TS packets forming a base stream, TS packets forming each of first to n-th extension streams having extensibility for the base stream, each of the TS packets having transport priority information that indicates priority and respectively distinguishes the base stream from the first to n-th extension streams;

a determining step of referring to the transport priority information stored in the TS packets input by the input step and determining the type of processable stream;

a selecting step of selecting, from the stream, the TS packets having the transport priority information associated with the stream determined by the determining step to be processable; and

a decoding step of decoding, using the information processing apparatus, the TS packets selected by processing in the selecting step.

Claim 30. (Previously Presented): A non-transitory computer readable medium having stored thereon a program that when executed by the computer causes the computer to execute an information processing method comprising:

an input step of inputting a stream including TS packets forming a base stream, TS packets forming each of first to n-th extension streams having extensibility for the base stream, each of the TS packets having transport priority information that indicates priority and respectively distinguishes the base stream from the first to n-th extension streams;

a determining step of referring to the transport priority information stored in the TS packets input by the input step and determining the type of processable stream;

a selecting step of selecting, from the stream, the TS packets having the transport priority information associated with the stream determined by the determining step to be processable; and

a decoding step of decoding the TS packets selected by processing in the selecting step.

Claim 31. (Previously Presented): A non-transitory computer readable medium having stored thereon a data structure of an entire stream to be played back by a computer, the entire stream including a base stream and first to n-th extension streams having extensibility for the base stream,

wherein the entire stream includes:

TS packets forming the base stream,

TS packets forming each of the first to n-th extension stream, and

a header of each of the TS packets forming the base stream and the TS packets forming each of the first to n-th extension streams includes an ID identifying the TS packet, and

wherein the TS packets each include transport priority information that indicates priority and respectively distinguishes the base stream from the first to n-th extension streams.

Claim 32. (Previously Presented): The non-transitory computer readable medium according to claim 31, wherein

the TS packets forming the base stream and the TS packets forming each of the first to n-th extension streams, which are included in the entire stream, are arranged in sequence of the TS packets to be played back at the same time and in the order of the TS packets forming the base stream and the TS packets forming each of the first to n-th extension streams.

Claim 33. (Currently Amended): An information processing apparatus comprising:  
encoding means for encoding at least a base stream of an entire stream that may include the base stream and first to n-th extension streams having extensibility for the base stream;

first adding means for adding a same first ID to the stream encoded by the encoding means among the base stream and the first to n-th extension streams, the first ID identifying the entire stream;

second adding means for adding transport priority information to, among the base stream and the first to n-th extension streams, the stream encoded by the encoding means, the transport priority information indicating priority and respectively distinguishing the base stream ~~from~~, from the first to n-th extension streams; and

a packetizing means for packetizing the base stream and the first to n-th extension streams, to which the first ID and the transport priority information are added by the first adding means and the second adding means, into TS packets.

Claim 34. (Previously Presented): The information processing apparatus according to Claim 33, wherein

the encoding means encodes the TS packets forming the base stream and the TS packets forming each of the first to n-th extension streams, which are included in the entire stream, so that the TS packets to be played back at the same time are arranged in sequence in the order of the TS packets forming the base stream and the TS packets forming each of the first to n-th extension streams.

Claim 35. (Currently Amended): The information processing apparatus according to Claim 33, wherein

when any of synchronization units of the first to n-th extension streams corresponding to synchronization units of the base stream are present, the encoding means encodes, among the first to n-th extension streams, the extension stream having the present synchronization units ~~and~~ of the base stream.

Claim 36. (Previously Presented): The information processing apparatus according to Claim 35, wherein

when any of the synchronization units of the first to n-th extension streams corresponding to the synchronization units of the base stream are present, the encoding means encodes, among the first to n-th extension streams, the extension stream having the present synchronization units and the base stream and does not encode the extension stream having none of the present synchronization units, thereby encoding the entire stream using variable bit rate.

Claim 37. (Previously Presented): An information processing method implemented using an information processing apparatus having at least encoding and packetizing parts. comprising:

an encoding step of encoding, using the information processing apparatus, at least a base stream of an entire stream that may include the base stream and first to n-th extension streams having extensibility for the base stream;

a first adding step of adding a same first ID to the stream encoded by the encoding step among the base stream and the first to n-th extension streams, the first ID identifying the entire stream;

a second adding step of adding transport priority information to, among the base stream and the first to n-th extension streams, the stream encoded by the encoding step, the transport priority information indicating priority and respectively distinguishing the base stream from the first to n-th extension streams; and

a packetizing step of packetizing, using the information processing apparatus, the base stream and the first to n-th extension streams, to which the first ID and the transport priority information are added by the first adding step and the second adding step, into TS packets.

Claim 38. (Previously Presented): A non-transitory computer readable medium having stored thereon a program that when executed by the computer causes the computer to execute an information processing method comprising:

an encoding step of encoding at least a base stream of an entire stream that may include the base stream and first to n-th extension streams having extensibility for the base stream;

a first adding step of adding a same first ID to the stream encoded by the encoding step among the base stream and the first to n-th extension streams, the first ID identifying the entire stream;

a second adding step of adding transport priority information to, among the base stream and the first to n-th extension streams, the stream encoded by the encoding step, the transport priority information indicating priority and respectively distinguishing the base stream from the first to n-th extension streams; and

a packetizing step of packetizing the base stream and the first to n-th extension streams, to which the first ID and the transport priority information are added by the first adding step and the second adding step, into TS packets.

Claim 39. (Previously Presented): An information processing apparatus comprising:  
input means for inputting an entire stream that includes at least one of TS packets forming a base stream and TS packets forming each of first to n-th extension streams having extensibility for the base stream;

selecting means for selecting, from the entire stream, processable TS packets based on a first ID used to identify the entire stream, transport priority information indicating priority and respectively distinguishing the base stream from the first to n-th extension streams, and a predetermined condition set in advance, the first ID and the transport priority information being stored in each of the TS packets input by the input means; and

decoding means for decoding the TS packets selected by the selecting means.

Claim 40. (Previously Presented): The information processing apparatus according to Claim 39, wherein

the entire stream is input to the input means including the TS packets arranged in sequence of the TS packets to be played back at the same time and in the order of the TS packets forming the base stream and the TS packets forming each of the first to n-th extension streams.

Claim 41. (Previously Presented): The information processing apparatus according to Claim 39, wherein

the entire stream input to the input means at least includes an encoded base stream, and further includes the first to n-th extension streams which correspond to synchronization units of the base stream and which are encoded using variable bit rate.

Claim 42. (Previously Presented): An information processing method implemented using an information processing apparatus having at least a decoding part, comprising:

an input step of inputting an entire stream that may include TS packets forming a base stream and TS packets forming each of first to n-th extension streams having extensibility for the base stream;

a selecting step of selecting, from the entire stream, processable TS packets based on a first ID used to identify the entire stream, transport priority information indicating priority and respectively distinguishing the base stream from the first to n-th extension streams, and a predetermined condition set in advance, the first ID and the transport priority information being stored in each of the TS packets input by processing in the input step; and

a decoding step of decoding, using the information processing apparatus, the TS packets selected by processing in the selecting step.

Claim 43. (Previously Presented): A non-transitory computer readable medium having stored thereon a program that when executed by the computer causes the computer to execute an information processing method comprising:

an input step of inputting an entire stream that may include TS packets forming a base stream and TS packets forming each of first to n-th extension streams having extensibility for the base stream;

a selecting step of selecting, from the entire stream, processable TS packets based on a first ID used to identify the entire stream, transport priority information indicating priority and respectively distinguishing the base stream from the first to n-th extension streams, and a predetermined condition set in advance, the first ID and the transport priority information being stored in each of the TS packets input by processing in the input step; and

a decoding step of decoding the TS packets selected by processing in the selecting step.

Claim 44. (Previously Presented): A non-transitory computer readable medium having stored thereon a data structure of an entire stream to be played back by a computer, wherein the entire stream includes at least one of a base stream and first to n-th extension streams having extensibility for the base stream,

the entire stream includes:

TS packets forming the base stream; and

TS packets forming, when any of synchronization units of the first to n-th extension streams corresponding to synchronization units of the base stream are present, among the first to n-th extension streams, the extension stream having the present synchronization units; and

a header of each of the TS packets forming the base stream and the TS packets forming each of the first to n-th extension streams includes:

a first ID used to identify the entire stream; and

transport priority information indicating priority and respectively distinguishing the base stream from the first to n-th extension streams.

Claim 45. (Previously Presented): The non-transitory computer readable medium according to claim 44, wherein

the TS packets forming the base stream and the TS packets forming each of the first to n-th extension streams, which are included in the entire stream, are arranged in sequence of the TS packets to be played back at the same time and in the order of the TS packets forming the base stream and the TS packets forming each of the first to n-th extension streams.

Claim 46. (Previously Presented): The non-transitory computer readable medium according to claim 44, wherein

the entire stream at least includes the base stream, and further includes the TS packets forming the first to n-th extension streams corresponding to the synchronization units of the base stream, the number of the TS packets being variable.

Claim 47. (New): An information processing apparatus comprising:

encoding means for encoding at least a base stream of an entire stream that may include the base stream and first to n-th extension streams having extensibility for the base stream;

first adding means for adding a same first ID to the stream encoded by the encoding means among the base stream and the first to n-th extension streams, the first ID identifying the entire stream;

second adding means for adding a second ID that differs from the first ID, among the base stream and the first to n-th extension streams, to the stream encoded by the encoding means, the second ID respectively distinguishing the base stream from the first to n-th extension streams; and

a packetizing means for packetizing the base stream and the first to n-th extension streams, to which the first ID and the second ID are added by the first adding means and the second adding means, into TS packets.

Claim 48. (New): The information processing apparatus according to Claim 47, wherein

the encoding means encodes the TS packets forming the base stream and the TS packets forming each of the first to n-th extension streams, which are included in the entire stream, so that the TS packets to be played back at the same time are arranged in sequence in the order of the TS packets forming the base stream and the TS packets forming each of the first to n-th extension streams.

Claim 49. (New): The information processing apparatus according to Claim 47, wherein

when any of synchronization units of the first to n-th extension streams corresponding to synchronization units of the base stream are present, the encoding means encodes, among the first to n-th extension streams, the extension stream having the present synchronization units of the base stream.

Claim 50. (New): The information processing apparatus according to Claim 49, wherein

when any of the synchronization units of the first to n-th extension streams corresponding to the synchronization units of the base stream are present, the encoding means encodes, among the first to n-th extension streams, the extension stream having the present synchronization units and the base stream and does not encode the extension stream having none of the present synchronization units, thereby encoding the entire stream using variable bit rate.

Claim 51. (New): An information processing method implemented using an information processing apparatus having at least encoding and packetizing parts. comprising:

an encoding step of encoding, using the information processing apparatus, at least a base stream of an entire stream that may include the base stream and first to n-th extension streams having extensibility for the base stream;

a first adding step of adding a same first ID to the stream encoded by the encoding step among the base stream and the first to n-th extension streams, the first ID identifying the entire stream;

a second adding step of adding a second ID that differs from the first ID, among the base stream and the first to n-th extension streams, to the stream encoded by the encoding means, the second ID respectively distinguishing the base stream from the first to n-th extension streams; and

a packetizing step of packetizing, using the information processing apparatus, the base stream and the first to n-th extension streams, to which the first ID and the second ID are added by the first adding means and the second adding means, into TS packets.

Claim 52. (New): A non-transitory computer readable medium having stored thereon a program that when executed by the computer causes the computer to execute an information processing method comprising:

an encoding step of encoding, using the information processing apparatus, at least a base stream of an entire stream that may include the base stream and first to n-th extension streams having extensibility for the base stream;

a first adding step of adding a same first ID to the stream encoded by the encoding step among the base stream and the first to n-th extension streams, the first ID identifying the entire stream;

a second adding step of adding a second ID that differs from the first ID, among the base stream and the first to n-th extension streams, to the stream encoded by the encoding means, the second ID respectively distinguishing the base stream from the first to n-th extension streams; and

a packetizing step of packetizing, using the information processing apparatus, the base stream and the first to n-th extension streams, to which the first ID and the second ID are added by the first adding means and the second adding means, into TS packets.

Claim 53. (New): An information processing apparatus comprising:

input means for inputting an entire stream that includes at least one of TS packets forming a base stream and TS packets forming each of first to n-th extension streams having extensibility for the base stream;

selecting means for selecting, from the entire stream, processable TS packets based on a first ID used to identify the entire stream, a second ID respectively distinguishing the base stream from the first to n-th extension streams, and a predetermined condition set in advance,

the first ID and the second ID being different from one another and being stored in each of the TS packets input by the input means; and

decoding means for decoding the TS packets selected by the selecting means.

Claim 54. (New): The information processing apparatus according to Claim 53, wherein

the entire stream is input to the input means including the TS packets arranged in sequence of the TS packets to be played back at the same time and in the order of the TS packets forming the base stream and the TS packets forming each of the first to n-th extension streams.

Claim 55. (New): The information processing apparatus according to Claim 53, wherein

the entire stream input to the input means at least includes an encoded base stream, and further includes the first to n-th extension streams which correspond to synchronization units of the base stream and which are encoded using variable bit rate.

Claim 56. (New): An information processing method implemented using an information processing apparatus having at least a decoding part, comprising:

an input step of inputting an entire stream that may include TS packets forming a base stream and TS packets forming each of first to n-th extension streams having extensibility for the base stream;

a selecting step of selecting, from the entire stream, processable TS packets based on a first ID used to identify the entire stream, a second ID respectively distinguishing the base stream from the first to n-th extension streams, and a predetermined condition set in advance,

the first ID and the second ID being different from one another and being stored in each of the TS packets input by the input step; and

a decoding step of decoding, using the information processing apparatus, the TS packets selected by processing in the selecting step.

Claim 57. (New): A non-transitory computer readable medium having stored thereon a program that when executed by the computer causes the computer to execute an information processing method comprising:

an input step of inputting an entire stream that may include TS packets forming a base stream and TS packets forming each of first to n-th extension streams having extensibility for the base stream;

a selecting step of selecting, from the entire stream, processable TS packets based on a first ID used to identify the entire stream, a second ID respectively distinguishing the base stream from the first to n-th extension streams, and a predetermined condition set in advance, the first ID and the second ID being different from one another and being stored in each of the TS packets input by the input step; and

a decoding step of decoding, using the information processing apparatus, the TS packets selected by processing in the selecting step.

Claim 58. (New): A non-transitory computer readable medium having stored thereon a data structure of an entire stream to be played back by a computer, wherein the entire stream includes at least one of a base stream and first to n-th extension streams having extensibility for the base stream,

the entire stream includes:

TS packets forming the base stream; and

TS packets forming, when any of synchronization units of the first to n-th extension streams corresponding to synchronization units of the base stream are present, among the first to n-th extension streams, the extension stream having the present synchronization units; and

a header of each of the TS packets forming the base stream and the TS packets forming each of the first to n-th extension streams includes:

a first ID used to identify the entire stream; and

a second ID being different from the first ID and respectively distinguishing the base stream from the first to n-th extension streams.

Claim 59. (New): The non-transitory computer readable medium according to claim 58, wherein

the TS packets forming the base stream and the TS packets forming each of the first to n-th extension streams, which are included in the entire stream, are arranged in sequence of the TS packets to be played back at the same time and in the order of the TS packets forming the base stream and the TS packets forming each of the first to n-th extension streams.

Claim 60. (New): The non-transitory computer readable medium according to claim 58, wherein

the entire stream at least includes the base stream, and further includes the TS packets forming the first to n-th extension streams corresponding to the synchronization units of the base stream, the number of the TS packets being variable.